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BELLVILLE BRANCH



ERADICATING CATTLE SCABIES

PA-471

U.S. DEPARTMENT OF AGRICULTURE



BN-13314X

Advanced case: common (psoroptic) scabies.



BN-13306

Taking skin scrapings for common scab mites.

BN-13530

**Cover: Common scab, or psoroptic, mite:
Adult female (greatly enlarged).**

ERADICATING CATTLE SCABIES

Scabies is a contagious skin disease of cattle. It is caused when the common scab mite—or psoroptic mite—pierces the animal's skin to feed. Discharge from the mite wound oozes onto the surface of the skin and forms scabs, or crusts. At times, the affected areas become infected with bacteria.

Cattle with scabies lick, rub, and scratch themselves to relieve intense itching. They lose weight and condition. Occasionally animals die from heavy infestations.

The disease can be eradicated by treating infected and exposed cattle with chemicals that kill the mites. By use of such treatments, State-Federal cooperative eradication programs have eliminated cattle scabies from large sections of the United States. States and the U.S. Department of Agriculture are cooperating to complete scabies eradication.

DISEASES RESEMBLING SCABIES

Symptoms of scabies resemble those of mange, and the diseases often are confused. Mange includes a group of contagious skin diseases:

- Chorioptic mange, caused by the chorioptic mite.
- Sarcoptic mange, caused by the sarcoptic mite.

- Demodectic mange, caused by the demodectic mite.

All cattle are susceptible to scabies and mange. The diseases occur most often among poorly nourished, old, or weak cows, and among bulls. Cattle may be infested with more than one species of mite at the same time.

Chorioptic mange and sarcoptic mange can be eradicated by the same treatment that eradicates scabies. For this reason, the three diseases are discussed together in this publication.

Because the same treatment does not eradicate demodectic mange, this disease will not be discussed here.¹

MITES

The mite that causes scabies is similar to the two species that cause mange. They are barely visible to the unaided eye, but may be readily seen when placed on a dark background and magnified under a hand lens. Adults are eight-legged, oval-shaped, whitish parasites. Mites spend their lives on the host animal.

Mites require 10 to 12 days to complete their life cycles. They live on or in the animal's skin. The chorioptic mite is more active and moves faster than the common or the sarcoptic mite.

SPREAD

Mites spread from infested to clean cattle by direct contact. They also are transmitted on blankets, brushes, and similar equipment. They often are spread unintentionally by sale or exchange of infected animals. More cases appear in dairy herds and other closely confined cattle than in those on open range.

Ordinarily scabies and mange do not spread from cattle to other animals.

¹ Information about demodectic mange in cattle may be obtained from your county agricultural agent or the U.S. Department of Agriculture, Washington 25, D.C.

Milkers and other attendants may develop sarcoptic mange from infested dairy cows. Mites may cause great discomfort. Consult a physician about treatment.

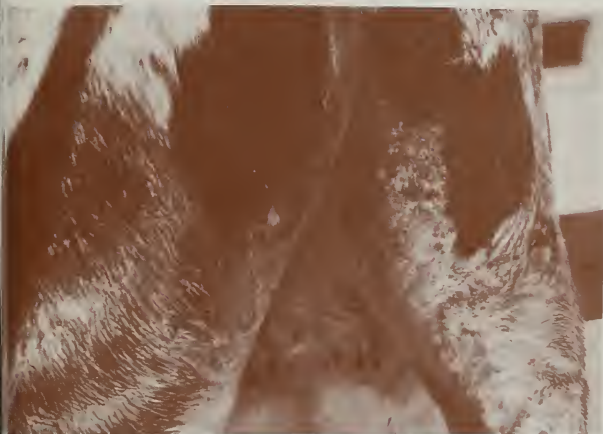
Cattle do not develop immunity to scabies or mange. Whether or not they have been affected previously, most animals are readily infested when they are exposed to mites.

SYMPTOMS

A “scabby” appearance is the best-known sign of scabies and of mange. Typical lesions are hard, thick, and gray. In advanced cases of scabies and mange, these scabs may cover large areas of the affected animal’s body.

The diseases are difficult to detect in early stages, before the mites are well established. Affected cattle may seem restless, and their hair may be disturbed from increased licking and rubbing. These are the only signs of scabies or mange until scabs form.

As scabby areas enlarge, skin may become raw from rubbing and scratching. Itching usually is more intense in common scabies and sarcoptic mange than in chorioptic mange.



BN-13308

Skin lesions of chorioptic mange.

Affected animals lose hair from scabby areas, and the skin becomes thick and hard. Milk production drops. Severely affected animals stop eating and begin to lose weight; if not treated, they may die.

DEVELOPMENT

Scabies and mange may occur at any time of the year. They are sometimes mistakenly considered cold-weather diseases, because mites are most active in fall and winter. In summer, the mites are less active; often scabs heal and scabby or mangy animals temporarily appear "cured." If the infestation is not found and treated during the summer, scabs will appear with the return of cold weather.

Scabs normally begin to form 15 to 45 days after the mites get on the host animal. If the mites are not killed, scabies or mange may gradually spread over the entire body of the infested animal.

COMMON SCABIES

Common scab mites first attack areas where hair is thick—the withers, the back, or the tail-head. Serum oozes from wounds and hardens into yellow or gray scabs; frequently these scabs are blood stained. Skin at the edge of an active lesion is swollen, red, and moist. As mites continually move outward to feed on healthy skin, the scabs enlarge. Hair gradually disappears from scabby areas, and the skin becomes thick, corrugated, and dry.

CHORIOPTIC MANGE

Although chorioptic mites may attack any part of the body, they often infest the escutcheon first. The wounds are small, and the skin under the thin scabs is only slightly swollen and inflamed. Scabby areas build up slowly. Chorioptic mites do not produce noticeable lesions until mange is well advanced. As hair is rubbed off, the skin appears thick, wrinkled, and corrugated.



BN-13307

Extensive lesions of sarcoptic mange.

SARCOPTIC MANGE

The sarcoptic mite pierces the upper layer of the animal's skin and makes a burrow underneath. After mating, the female lays eggs in the burrow.

Sarcoptic mange normally develops on the escutcheon and inner surfaces of the thighs, although mites sometimes attack other parts of the body. Yellow beads of dried serum form on the reddened, swollen skin over the burrow as the embedded mites feed. The diseased areas enlarge when mites multiply. In infested areas, most of the animal's hair drops out or is rubbed off, but a few hairs over the affected part are held erect by dried serum and scabs. Infected cattle develop thick, deeply wrinkled skin.

OBSERVING CATTLE

It is good practice to observe cattle carefully at regular intervals for signs of scabies. Select a location from which you can watch the animals without disturbing them. Look for rest-

lessness, scratching, rubbing, lesions, and other scabies symptoms.

If cattle show any symptoms or if you suspect scabies, examine the animals individually. Isolate affected cattle. Consult your veterinarian or a State or Federal disease-control official promptly to obtain expert inspection, diagnosis, and advice.

FINDING THE MITES

A thorough examination of suspect cattle should be made by a veterinarian, livestock inspector, or cattleman who is familiar with the different mites and the symptoms of scabies and mange. An inexperienced examiner may overlook mites.

To find the parasites, the examiner usually scrapes the outer edge of a scabby area with a blunt-edged knife. To find sarcoptic mites in their burrows beneath the skin, he must scrape the irritated area until blood oozes from the tissues. Then he puts scrapings on a piece of carbon paper, and places it in bright sunlight or near artificial heat. If mites are present, they will appear under a hand lens as tiny white objects moving over the dark background.



BN-13315X

Inspecting edges of lesions for scab mites.

Field identification of mites by an inspector or veterinarian usually is verified by a laboratory.

If you find mites on cattle or if you suspect that your animals have scabies or mange, call your veterinarian, or notify State or Federal disease-control officials.

TREATMENT

Acaricides, or mite-killing chemicals, are used to treat cattle with scabies or mange. When properly used, these chemicals kill mites without injuring cattle.

Every animal in the infected or exposed herd should be treated. If a single infested animal escapes, it could again infest the entire herd.

Infected herds should be treated as soon as possible after scabies or mange is diagnosed. Cattle can be treated without injury at any time of year—even when the weather is extremely cold.

METHODS OF TREATMENT

Chemicals are applied under the supervision of a State or Federal inspector. Cattle may be treated by—

- Dipping. Cattle are dipped in permanent vats. Animals should be soaked to the skin when submerged in the mite-killing dip.

- Spray-dipping. Box-type spray-dipping machines must be used for this type of treatment. Jet spray heads are arranged above, below, and on both sides of a chute that holds the animal. The spray dipping machine should soak the animal to the skin with the mite-killing chemical in several short treatments totaling at least 1 minute. Orchard sprayers, hand sprayers, and similar equipment are not approved for treating cattle with scabies or mange. Approved box-type equipment may be found at public stockyards, sales barns, or on farms and ranches.

After proper treatment, animals usually regain weight and condition rapidly.

NUMBER OF TREATMENTS

Giving infected and exposed cattle two treatments for mites is a sound disease-prevention practice.

Under Federal laws, infected cattle can move interstate for any purpose after two treatments for scabies, given at 10- to 14-day intervals. Infected cattle can move interstate for immediate slaughter after one treatment.

Exposed cattle can move interstate for any purpose after they have been given one treatment for scabies. Under specified conditions, exposed cattle that have been certified as scabies-free may be shipped interstate for immediate slaughter. The State or Federal inspector who certifies animals can advise owners about such interstate shipments.



BN-13316X

Dipping cattle for scabies.

HANDLING CATTLE

Handle cattle carefully throughout treatment.

Examine chutes, pens, and other equipment before bringing cattle to the treatment area. Remove nails, broken boards, or other objects that could injure animals.

Allow cattle to rest and cool off before they are treated.

Water and feed cattle 2 to 4 hours before treatment. Have clean feed and water ready following treatment.

When animals are to be dipped—

- Treat lesions by hand before animals enter the vat. Break up hard scabs with fingers or a brush so the dip can reach the mites. Then soak affected parts thoroughly with fresh dip. Sometimes, hand-treatment of lesions while animals are in the dipping vat is more practical than pretreatment.

- With a dipping fork, submerge each animal's head in the dip for an instant at least twice.

When animals are to be spray-dipped—

- Break up large lesions with a scraper and use a hose attachment to soak them thoroughly with the dip before animals enter the spray-dipping area.

- Be sure all spray heads are operating so that every treated animal is thoroughly soaked.

Caution: Dips are poisonous. They must be used at permitted strengths and temperatures, under carefully controlled conditions. Cattle may be injured if they are improperly dipped, overcrowded, or roughly handled. Animals that swallow quantities of dip may be poisoned.

CLEANING AND DISINFECTION

If mites are found in a herd, the grounds, pens, barns, corrals, and other premises that infected cattle have used should be thoroughly cleaned and disinfected.

Remove and burn all litter, manure, and bedding to which mites may cling. Spray all exposed surfaces of buildings with one of the permitted dips or disinfectants.

Do not rehouse treated cattle until their quarters have been cleaned and disinfected. Mite-free cattle may safely occupy premises or buildings that have been properly disinfected.

ERADICATION PROGRAMS

The cooperative State-Federal eradication programs have proved that scabies and mange can be wiped out. States control the movement of cattle with scabies or mange within their borders. Federal laws prohibit the interstate shipping, driving, or moving of scabby cattle for any purpose. However, interstate movement is permitted after infected or exposed cattle have been freed of mites by proper treatment, and are so certified by a Federal inspector.

Your local veterinarian, your State veterinarian, or the Federal veterinarian in charge in your State can give you further information about current eradication programs.



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